T-1044-2017a

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What

- High rapidity Inner and Outer HCAL (4x4)
- High rapidity 2D projective EMCAL (8x8)
- T-1044-2016a EMCAL (8x8)
- HBD digitizers
  - Same 192 channels as last time
  - sphenixdaq/FE3/JSEB
- “New digitizers”
  - 128 channels plus spare
  - va096/DCM II/JSEB II
- Tile mapper
- Oleg’s hodoscope
- Veto counters
- Trigger S1•S2•S3

When

- Ship during week of Jan 9
  - Do not arrive Fri Jan 13
  - Mon Jan 16 is MLK holiday
- Wed Jan 18 is installation day
- Thu Jan 19 ORC
- Fri Jan 20 Inaugural run
- Tues Feb 21 uninstall
- Thu Feb 23 or Mon Feb 27 ship it back

“Lessons learned” (from Wiki)

- What is exact schedule for delivery and install for 2017 run? If we were to delay, dates?
  - Delivery Jan 9-12, install in enclosure Jan 18
  - We’re not delaying
- Work on including MWPC data properly timed and triggered with calorimeter data
  - Agree
- Need to do better job monitoring support systems/detectors (e.g. cerenkov counters, …)
  - Agree, though I think by the end they were ok
- Discussion about how best to quantitatively select good EMCal modules
  - Hmm
- Need to investigate the temperature compensation
  - Sort of agree… may want more frequent temperature measurements; it would be nice not to have the high speed temperature oscillations; also want interspersed LED events
- Need to take more position/energy scans of the EMCal
  - Definitely; I propose we redo these scans on EMCAL #1
- What are we doing about a trigger hodoscope. Will we have access to Oleg’s hodoscope?
  - I hope so… we should check

MWPC

- Martin has investigated triggering, and it should be possible, but we have to set some time aside to set up the timing relative to the ADC's
- I have in mind a few changes to the "Boosy box" that should make this easier to accomplish (and I think is likely to eliminate the DAQ hang)
- We'll have to survey the detectors better, at least we can get a Fluke 424 laser rangefinder, or someone might want to experiment with a visual fiducial system like this: https://april.eecs.umich.edu/wiki/AprilTags
- We need to have tracking software ready to use; there's no point in taking data with it unless and until we can extrapolate a track to the hodoscope and get the right finger
- Martin has data now in the format he plans to record it to test this

First go at a run plan

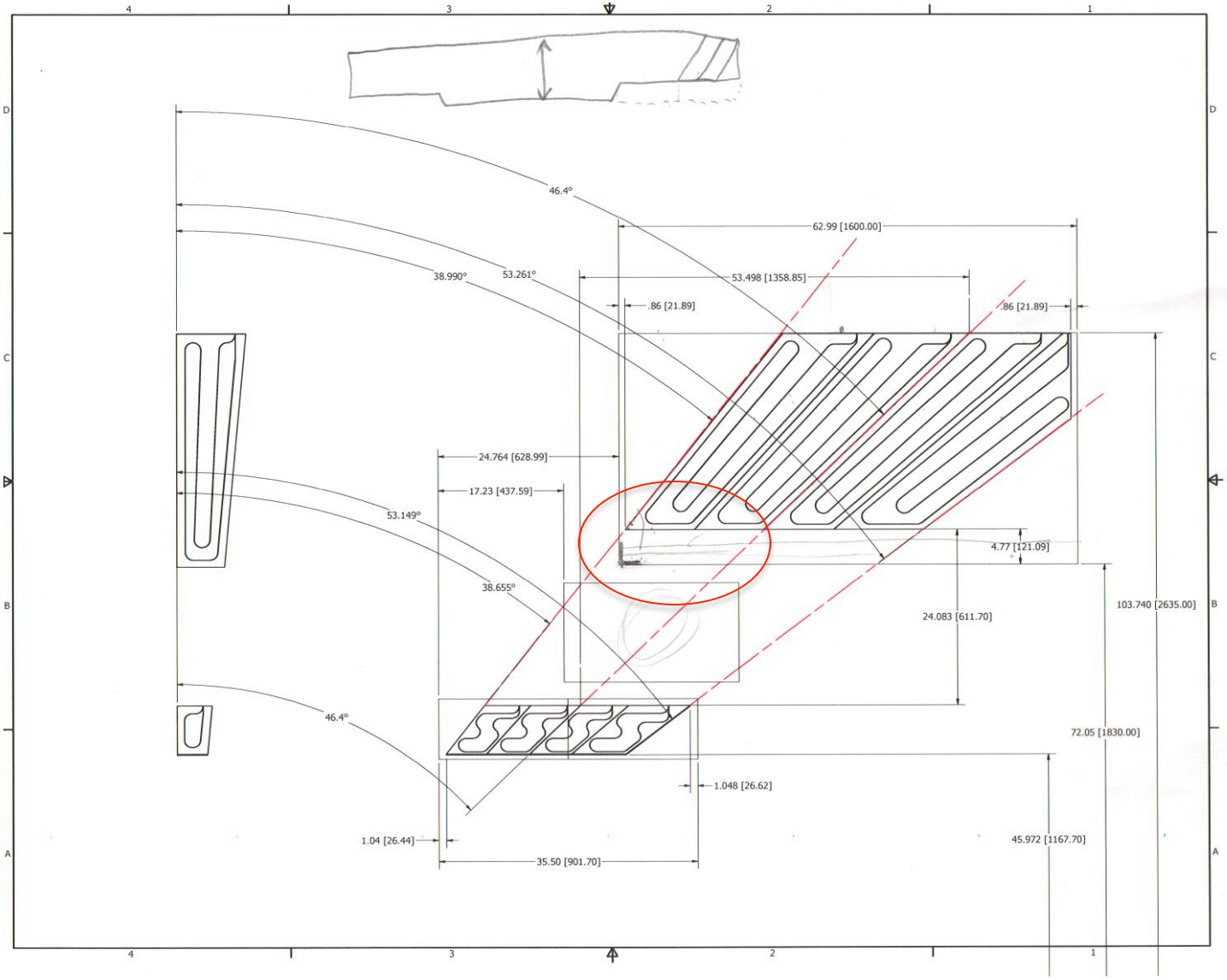
- Week 1Jan 18-25
  - Install, ORC, establish trigger and timing, verify instrumentation (Cerenkov, hodoscope, veto counters), MWPC, take first data with all calorimeters, PbGl, begin fine scan of EMCAL I on 2c table with HBD electronics
- Week 2 Jan 25- Feb 1
  - Fine scan/calibration of EMCAL II with new electronics on 2c table
- Week 3 Feb 1-Feb 8 (pre-Quark Matter)
  - Move EMCAL II in front of HCAL for combined running
- Week 4 Feb 8-15 (Quark Matter)
- Week 5 Feb 15-22
  - Final data set

Thoughts and concerns

- I'll try and intersperse physics and LED and/or cosmic triggers
- We need some drawings showing the calorimeters in the enclosure; we reuse the railroad?
- Do we want to tilt the HCAL at all?
- Need to have better control the geometry (markings on the calorimeters, pre-planned positions and orientations)
- Should we plan to run the whole test with the new digitizers?
- Do we have the gains set right?
- Should we plan to daisy-chain the power in the two racks in the counting house and the two racks in the enclosure?
- It would be nice to make the move from the 2c table to the HCAL a little easier
- He pipes
- Are we running 12 hour days or 24 hour days?

HCAL detector preparation

- HCAL times will arrive in the next few weeks according to Edward
- Cosmic test the tiles
- SiPM boards for HCAL? Reuse HCAL I?
- Cable length for outer HCAL… bury the tiles?
- Start inserting tiles in steel by Nov 1
- Complete operational detectors by Dec 1
- New preamps; same controller (except for firmware mods for LED pulser)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EMCAL detector preparation

- Parts to make modules on hand or on order… first detector grade module in October
- Light guides
- New preamps are needed
- Needs its own new stand

Software

- A few more monitoring plots
  - Cerenkov counters
  - Hodoscope
  - EMCAL event display
  - Raw total energy
  - Timing
- I don’t see any reason to change our basic workflow
  - rcdaq
  - Copy data to rcf immediately
  - Monitoring
  - Quick look at prdf’s using whatever you like
  - DST production at BNL

Arrangements

- Eric updated the Wiki with some useful information
- On-site housing is tight (I'm wait-listed)
- Show your availability here:
  - http://doodle.com/poll/2inumufgkdw8davz
  - You can ask some of the people from last time, but I would suggest coming for 3-4 day stretches at a minimum
- Should someone look into scheduling a tour from QM?
- Make your Bien Trucha reservations

What happens after this???

- This may be the last beam test of an HCAL
  - The HCAL sectors are too large for FTBF… maybe we could squeeze in the Inner, but the Outer is to long and heavy
  - Mechanical prototype could be at BNL in summer
- The next step for the EMCAL is a half-sector (8x48)
  - One more beam test